UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/398,378	09/17/1999	LEONARD CORNING LAHEY	BO9-99-030	1012

24033   7590   07/17/2002

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EXAMINER
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ART UNIT	PAPER NUMBER
3623	7

DATE MAILED: 07/17/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 07-01)

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>25 April 2002</u> .

2a)☐ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-36</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-36</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____ .

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>3</u> .

4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: .

DETAILED ACTION

1.   The following is a Final Office Action in response to the communication received

on April 17, 2002. Claims 1-36 are still pending.

Response to Amendments

2.   Applicant's amendments to the numbering of the claims is sufficient to overcome

the claim objections set forth in the previous office action. Hence, the previous

objections are now withdrawn.

Claim Rejections - 35 USC § 102

3.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act

of 1999 (AIPA) do not apply to the examination of this application as the application

being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily

published under 35 U.S.C. 122(b). Therefore, this application is examined under 35

U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4.   Claims 1-6, 12-18, 24-30, and 36 are rejected under 35 U.S.C. 102(e) as being

anticipated by Torii (P.N. 6,389,446).

As per claims 1, 13, and 25, Torii discloses a method, a system, and an

article of manufacture, for processing a job, comprising: generating a signal when

status for the job is changed from a first status to a second status (see figures 4

and 5, lines 14-50, the status of the threads change and a signal is generated in

order to change status);

notifying a work process associated with the second status that one job

had its status changed to the second status in response to the signal (see figures

4-5, column 6, lines 14-50, The job in the work process, inside the thread, was

notified of the change in status);

processing, with the work process, the job that had its status changed

from the first status to the second status (see figures 4-5, column 6, lines 14-50,

The job in the work process, inside the thread, was processed); and

modifying, with the work process, the status of the job after completing the

processing of the job (see figures 4-5, column 6, lines 14-30, The status of the

job is modified after the job is completed).

As per claims 2, 14, and 26, Torii discloses all the limitations of the method of

claims 1, 13, and 25, wherein the signal is transmitted to a routing process and

indicates the second status, further comprising: processing with the routing process a

mapping associating each status with one work process in response to receiving the

signal (see figures 4-5, column 6, lines 13-42, each status is associated with a work

process and a signal); and

determining from the mapping one work process associated with the second

status, wherein the determined work process is notified of the job (see figures 4-5,

column 6, lines 13-42, the work process is notified of a job and a second status).

As per claim 3, 15, 27, Torii discloses all the limitations of the method of claims 1,

13, and 25 wherein job status is maintained in a database table including information on

the job, further comprising maintaining, with the work process, a connection with the

database that enables communication with the database table, wherein modifying the

status of the job after completing processing comprises updating the status of the job to

an output status associated with another work process, and wherein updating the status

with the output status generates the signal indicating a change in status (see column 6,

lines 64-67, through column 7, lines 1-18, and column 9, lines 47-67, through column

10, lines 1-12, and figures 8, 9 and 11, the thread status table stores the status of the

thread and is updated and a signal is generated to change the output).

As per claims 4, 16, and 28, Torii discloses all the limitations of the

method of claims 1, 13, and 25, wherein the signal is generated by an event

trigger in the database that responds to an update to the status of the job in the

database table (see column 6, lines 64-67, through column 7, lines 1-18, and

column 9, lines 47-67, through column 10, lines 1-12, and figures 5, and 11, the

signal is generated by an event and the status is updated).

As per claims 5, 17, and 29, Torii discloses all the limitations of the

method of claims 4, 16, and 28, wherein there are multiple work processes each

associated with one input status and at least one output status, wherein each

worker is enabled to update the job status with one associated output status after

completing the processing of the job, wherein the output status for one worker is

the input status associated with one other worker, and wherein the definition of

input and output statuses for workers defines the workflow of the job (see column

6, lines 64-67, through column 7, lines 1-18, there are multiple threads with

parents and children, the job status is updated which begins another job).

As per claims 6, 18, and 30, Torii discloses all the limitations of the

method of claim 3, 15, and 27, further comprising the work process performing:

determining whether the work process completed processing the job

successfully (see column 6, lines 43-50, the work process is determined to be

completed successfully if no error message is given); and

updating the status of the job to an error status if the work process did not

complete processing the job successfully, wherein the status of the job is

updated with one output status associated with the work process if the job work

process completed processing the job successfully (see column 6, lines 43-50,

the status of a job is updated to an error status if the job did not complete

successfully and then an error message is given).

As per claims 12, 24, and 36 Torii discloses all the limitations of the

method of claims 1, 13, and 25, further comprising: adding a status update to a

list providing status updates for each job (see column 9, lines 47-57, through

column 10, lines 1-13, the status updates are on a status table and the table, or

list); and

using the list to determine how the job has been processed by the work

processes (see column 9, lines 47-57, through column 10, lines 1-13, the status

updates on a status table , or list, can be used to determine the jobs processed

by the workflow process).

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

6.   Claims 7, 19, and 31, are rejected under 35 U.S.C. 103(a) as being unpatentable

over Torii in view of Flores et al (P.N. 6,056,413).

As per claims 7, 10-11, 19, 22-23, 31, and 34-35, Torii discloses all the limitations of the method of claim 6, 18, and 30. However, Tori does not explicitly disclose wherein an error worker is associated with the error status, wherein updating the job to the error status causes the notification of the error worker, further comprising the error worker: performing error recovery operations on the job; determining whether the error recovery operations corrected the job; and setting the jobs status of the corrected job to a first possible status in the workflow.

Torii discloses an error message (see column 6, lines 43-50). Flores et al. discloses performing error recovery operations on the job (see column 12, lines 1-9, and column 24, lines 35-40, An error message is displayed on the screen and an error worker receives this message and must perform error recovery so that the work processes can continue. Once the error recovery is completed, no error notification will be received and the workflow process will continue. The status of the workflow is returned once the error is corrected). It would be obvious to one of ordinary skill in the art at the time of the invention to teach an error recovery system as it allows the workflow system to more reliably complete a process.

As per claims 10, 22, and 34, Torii discloses all the limitations of the method of claims 1, 13, and 25. Torii does not explicitly disclose wherein the job comprises a data file, wherein at least one work process processes the data file

to alter its format and at least one other work process processes the data file in

the altered format to transmit the work process to an output device. However,

Flores discloses that the data can be formatted for different workflow processes

and for outgoing transactions (see column 7, lines 27-31, column 8, lines 14-30,

and figure 4). Therefore, it would be obvious to one of ordinary skill in the art at

the time of the invention to disclose altering a data file format to transmit to an

output device as it allows the work process to be more flexible in communicating

with other devices.

As per claims 11, 23, ad 35, Torii discloses all the limitations of the

method of claims 10, 22, and 34. Torii does not explicitly disclose wherein at

least two workers process the job at different devices in communication over a

network, further comprising accessing the job from another device over the

network to process the job at the device on which that worker executes.

However, Flores discloses the jobs using different devices to communicate over

the network (see figure 5, and column 8 lines 64-67, through column 9, lines 1-4).

It would be obvious to one of ordinary skill in the art at the time of the invention to

disclose processing the job at different devices over a communications network

as it allows the work process to more flexible in communicate with other devices.

7.   Claims 8-9, 20-21, and 32-33, are rejected under 35 U.S.C. 103(a) as

being unpatentable over Torii.

As per claims 8, 20, and 32, Torii discloses all the limitations of the

method of claim 3, 15, and 27. Torii does not explicitly disclose a database.

However, Torii does disclose a using a thread status table (see column 6, lines

14-30, and column 9, lines 47-67, through column 10, lines 1-13). Torii further

discloses wherein the work process further performs: having the status

associated with the work process and processing the job having the status

associated with the work process (see column 6, lines 64-67, through column 7,

lines 1-18, the status is associated with the work process and the job has its

status associated with the work process).

Torii also discloses terminating processing if there are no further jobs in

the having the status associated with the work process (see figure 16, and

abstract, the threads terminate in accordance to the thread status table).

As Torii does not disclose a database, Torii does not disclose querying the

database table for jobs. However, a database consists of tables and the use of

querying databases to determine the next job is a common and well known

technique used in the art. Therefore, it would be obvious for one of ordinary skill

in the art to disclose a querying a database as it allows the workflow process to

accurately and efficiently determine the next job to process.

As per claims 9, 21, and 33, Torii discloses all the limitations of the method of claims 8, 20, and 32, wherein the work process spawns a work thread to process one job in the database table having the status associated with the work process, wherein the work process is capable of spawning multiple work threads to process different jobs having the status associated with the work process (see abstract and figures 1-5, the work process are capable of generating work threads that have statuses associated with the work process).

Response to arguments

8.   The Applicant's arguments are persuasive and a new §103 rejection has been established. Therefore the old arguments are null and void.

9.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hsu et al. (P.N. 5,581,691) disclose a workflow management system.

10.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Rebecca Bachner** whose telephone number is 703-305-1872. The examiner can normally be reached on Monday - Friday from 8:30am to

5:00pm. If attempts to reach the examiner by telephone are unsuccessful, the

examiner's supervisor, **Tariq Hafiz** can be reached on **(703)305-9643**.

Any inquiry of a general nature or relating to the status of this application or

proceeding should be directed to the **Receptionist** whose telephone number is **(703)**

308-1113.

Any response to this action should be mailed to:

> *Commissioner of Patents and Trademarks*
>
> *Washington D.C. 20231*

or faxed to:

(703) 305-7687   Official communications; including After Final

communications labeled "Box AF"

(703) 746-7306   Informal/Draft communications, labeled "PROPOSED" or "

DRAFT"

Hand delivered responses should be brought to Crystal Park 5, 2451 Crystal

Drive, Arlington, VA, 7th floor receptionist.

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July 8, 2002

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